

FIRST REPORT OF *UNCINIA MACROLEPIS* AND *U. TENUIS* (CYPERACEAE) IN COLOMBIA AND NEW COLOMBIAN SITES FOR *U. PALUDOSA*

GERALD A. WHEELER

Department of Plant Biology, University of Minnesota Herbarium,
St. Paul, Minnesota 55108-1095

ABSTRACT. *Uncinia macrolepis* and *U. tenuis* are reported for the first time from Colombia. Additionally, four new Colombian sites are recorded for *U. paludosa*, previously known from only a single site in the country. A key to the five *Uncinia* species known to occur in Colombia is provided.

Key Words: Colombia, Cyperaceae, *Uncinia macrolepis*, *U. paludosa*, *U. tenuis*

The genus *Uncinia* Pers. (Cyperaceae), with some 60 to 70 species worldwide, is well represented in South America, with between 20 and 30 growing in the mountains and cooler regions of the continent (Wheeler and Goetghebeur 1995). Of these, *Uncinia hamata* (Sw.) Urban and *U. phleoides* (Cav.) Pers. have long been known from Colombia (Kükenthal 1909; Mora-Osejo 1966). More recently, *U. paludosa* G. A. Wheeler and Goetghebeur, well known from Ecuador, has been reported from a single Colombian site (Wheeler and Goetghebeur 1995).

While working on a revision of the *Uncinia* of Ecuador (Wheeler and Goetghebeur, in manuscript), many specimens from Colombia also were examined, some of which form the basis of this note. In this paper, two species of *Uncinia*, *U. macrolepis* Decne. and *U. tenuis* Poeppig ex Kunth, are reported for the first time from Colombia and four new Colombian sites are recorded for *U. paludosa*. A key to the five *Uncinia* species known to occur in Colombia is provided at the end of this report.

Uncinia macrolepis Decaisne in Dumont D'Urville, Voy. Pôle Sud 2: 13. 1853.

This species has a wide and rather remarkable distribution, occurring in northern South America, in Patagonia and Tierra del Fuego, and on the south-Atlantic islands of South Georgia and Tristan da Cunha (Wheeler 1994, 1995). In northern South America, specimens have been seen from Ecuador, Peru, and Venezuela; also, single specimens have been seen from Bolivia (*Beck*

21803 [MIN]) and Colombia (specimen cited below). The northern plants previously had been called *U. meridensis* Steyerl., whose type comes from Venezuela (Steyerl 1951), and Hooper (1968) considered similar-appearing plants from South Georgia (originally called *U. smithii* Philcox) and Tristan da Cunha to be conspecific with *U. meridensis*. In a separate paper (Wheeler 1995), however, it was demonstrated that the populations from northern South America, South Georgia, and Tristan da Cunha are morphologically indistinct from the Patagonian-Fuegian populations of *U. macrolepis*, whose name has priority.

In northern South America *Uncinia macrolepis* occurs near the upper limit of páramo, at elevations between 4000 and 4600 m (Wheeler and Goetghebeur, in manuscript). In Colombia, the single known locality for this species is at Alto Ritacuva in the Sierra Nevada del Cocuy, in the Department of Boyacá, where it grows at about 4550 m. At this site the species is common “between rocks on high slopes” and frequently is embedded in cushion plants. Because some páramo uncinias tend to look very similar, some Colombian specimens originally identified as *U. macrolepis* (as *U. meridensis*) actually are referable to *U. paludosa* (for more details and citation of specimens see under that species further below). Although similar in aspect, *U. macrolepis* and *U. paludosa* differ in several morphological features, and, in fact, are in different sections of the genus, with the former in section *Uncinia* and the latter in section *Platyandrae* C. B. Clarke (*sensu* Clarke 1883 and Kükenthal 1909). In addition to the differences given in the key, the style base of *U. macrolepis* is conspicuously enlarged, whereas that of *U. paludosa* is little thickened.

Colombia. Dpto. BOYACÁ: Cordillera Oriental, Sierra Nevada del Cocuy; Alto Ritacuva; alt. 4550 m, 11–29 Apr 1959, *Barclay & Juajibioy* 7449 (US).

Uncinia paludosa G. A. Wheeler & Goetghebeur, *Aliso* 14: 142. 1995.

This species occurs in northern South America, with many sites known from Ecuador (Wheeler and Goetghebeur 1995, in manuscript), five from Colombia (specimens cited below), and a single one from Peru (*León and Young* 1663 [NY]). In Colombia, it occurs in páramo, at elevations from about 3500 to 4000 m, growing primarily in bogs and swamps dominated by low shrubs and

herbs, such as *Chusquea* sp., *Espeletia lopezii*, and *Oritrophium limnophilium*.

Uncinia paludosa (sect. *Platyandrae*) appears to be closely related to *U. lacustris* G. A. Wheeler, thus far known only from Ecuador, but differs by having wider leaves, longer rachillae, and slightly larger perigynia and achenes (Wheeler and Goetghebeur 1995; see Figures 2 and 3 for a comparison of the two species). It also is related to *U. macloviana* Gaudich., which grows in Patagonia and on the Falkland Islands (Wheeler 1994), but differs by having smaller perigynia and achenes and pistillate scales that are about equal to or slightly exceed the perigynia.

As mentioned earlier, all of the specimens cited below originally were identified as *Uncinia meridensis* (here called *U. macrolepis*), but they actually are referable to *U. paludosa*. For differences between these two species, see the key and the discussion under *U. macrolepis*.

Colombia. Dpto. ARAUCA. Sierra Nevada del Cocuy. Quebrada El Playón: Hoya S. Luis, 1 km al N de la finca El Playón, alt. 3500 m, 13 Mar 1973, *Cleef 9153* (NY, U); Plan de S. José, alt. 3625 m, 9 Jun 1973, *Cleef 10057* (GB, NY, U).—Dpto. BOYACÁ: páramos al NW de Belén, cabaceras Quebrada Minas, Hoya Clla. Larga, alt. 3775 m, 2 Mar 1972, *Cleef 2092* (NY, U); Sierra Nevada del Cocuy, Alto Valle Lagunillas, NNE de la Laguna Pintada, alt. 3980 m, 3 Oct 1972, *Cleef 5782* (NY, U); Páramo de la Rusia, NW-N de Duitamo, Peña Blanca, 2 km al NE de Buenos Aires, alt. 3720 m, 16 Dec 1972, *Cleef 7318* (NY, U).

Uncinia tenuis Poeppig ex Kunth, Enum. Pl. 2: 525. 1837.

This species ranges from Tierra del Fuego (Wheeler 1994) northward to west-central Argentina (Barros 1969) and central Chile (Marticorena and Quezada 1985; Muñoz-Schick 1980) and is disjunct on the Juan Fernández Islands (Skottsberg 1922); further north it occurs in Ecuador (Wheeler and Goetghebeur, in manuscript) and is also reported from Costa Rica in Central America (Chater 1994). In Colombia, a single locality for this species is known from the summit of Quindío Pass, near the Caldas-Tolima boundary, where it grows on a “wind-beaten, bushy, wet crest” at about 3500 m.

Uncinia tenuis occurs primarily in forests and thickets, where it grows in loose mats in moist soil and also epiphytically on decaying, fallen trees. It is separated readily from the other Colombian uncinias by having glabrous perigynia and deciduous scales. Also, the inflorescence axes of this species, even when greatly

(or entirely) divested of perigynia, are identified easily by the presence of whitish or pale brown saccate appendages (about 1 mm long), which are the persistent portions of otherwise deciduous scales (Wheeler 1994). Notably, there are only two South American uncinias with deciduous scales and persistent saccate appendages, *U. tenuis* and *U. subsacculata* G. A. Wheeler and Goetghebeur, but the latter has shorter appendages (less than 0.5 mm long) and, thus far, is known only from the type locality in Ecuador (Wheeler and Goetghebeur 1995).

Colombia. Dpto. CALDAS–TOLIMA boundary: summit of Quindío Pass, 04° 28' N. lat., 75° 37' W. long., alt. 3500 m, 29 Nov 1944, *Fosberg 22389b* (US).

A KEY TO THE *UNCINIA* SPECIES OF COLOMBIA

1. Perigynia glabrous; pistillate scales deciduous (however, saccate appendages about 1 mm long persist); filaments narrow (ca. 0.1 mm wide); plants rhizomatous *U. tenuis*
1. Perigynia slightly to densely pubescent, the margins ciliate (at least distally); pistillate scales persistent; filaments wide (ca. 0.2–0.3 mm) or narrow; plants cespitose or rhizomatous (2)
 2. Spikes less than 2.5 cm long, with fewer than 20 perigynia per spike; filaments narrower than the anthers; culms frequently scabrous beneath the inflorescence *U. macrolepis*
 2. Spikes 2.5 cm long or longer, with more than 20 perigynia per spike; filaments as wide as anthers; culms usually smooth beneath the inflorescence (3)
 3. Longest perigynia more than 6.5 mm; achenes narrowly oblong; spikes thickish, clavate (or sometimes subclavate); robust plants up to 1.2 m tall *U. phleoides*
 3. Perigynia less than 6.5 mm long; achenes not narrowly oblong; spikes linear or subclavate; plants short or tall (4)
 4. Achenes more than 3 mm long; rachilla often bent just beneath the hook; spikes subclavate; leaves flaccid, some cauline *U. hamata*
 4. Achenes less than 3 mm long; rachilla straight or nearly so; spikes linear; leaves rigid and mostly ascending, usually all basal *U. paludosa*

ACKNOWLEDGMENTS. I thank Paul Goetghebeur (Gent University, Belgium) for correspondence regarding *Uncinia* and for information on the Colombian specimens of *U. paludosa* at the

Utrecht Herbarium (U), The Netherlands. Thanks also to the curators and directors of the following herbaria for the loan (or in-house study) of specimens from northern South America: AAU, F, G, GB, K, LD, MICH, MIN, MO, NY, P, QCA, US, and WIS.

LITERATURE CITED

- BARROS, M. 1969. Cyperaceae, pp. 38–92. *In*: M. N. Correa, ed., Flora Patagónica, Pt. II, Typhaceae a Orchidaceae (exceptio Gramineae). Colec. Cient. Instituto Nacional de Tecnología Agropecuaria. Vol. 8.
- CHATER, A. O. 1994. *Uncinia*. *In*: Davidse, G. et al., eds., Flora Mesoamericana 6: 473–474.
- CLARKE, C. B. 1883. On *Hemicarex* Benth., and its allies. J. Linn. Soc., Bot. 20: 374–403.
- HOOPER, S. 1968. Cyperaceae: *Uncinia*. Results Norweg. Sci. Exped. Tristan da Cunha 1937–1938, 54: 7–8.
- KÜKENTHAL, G. 1909. Cyperaceae: Caricoideae, pp. 1–824. *In*: A. Engler, ed., Das Pflanzenreich, IV. 20, Heft 38. Wilhelm Engelmann, Leipzig.
- MARTICORENA, C. AND M. QUEZADA. 1985. Catálogo de la flora vascular de Chile. Gayana, Bot. 42(1–2): 1–157.
- MORA-OSEJO, L. E. 1966. Cyperaceae, pp. 95–128. *In*: P. Pinto-Escobar y L. E. Mora-Osejo. Catálogo ilustrado de las plantas de Cundinamarca. Vol. I. Instituto de Ciencias Naturales, Universidad Nacional, Bogotá, Colombia.
- MUÑOZ-SCHICK, M. 1980. Flora del parque nacional Puyehue. Mus. Nac. Hist. Santiago, Chile.
- SKOTTSBERG, C. 1922. The phanerogams of the Juan Fernández Islands. Nat. Hist. Juan Fernández and Easter Is. 2: 95–240.
- STEYERMARK, J. A. 1951. Botanical exploration in Venezuela. I. Fieldiana, Bot. 28: 1–242.
- WHEELER, G. A. 1994. The *Uncinia* (Cyperaceae) of Tierra del Fuego, the Falkland Islands, and South Georgia. Ans. Inst. Pat., Punta Arenas, Chile 22 (1993–94): 21–31.
- . 1995. The status of *Uncinia macrolepis*, *U. meridensis*, and *U. smithii* (Cyperaceae) in the New World. Hickenia 2: 161–164.
- AND GOETGHEBEUR, P. 1995. Four new species of *Uncinia* (Cyperaceae) from northern South America. Aliso 14: 141–146.